

# JCIA Annual Report 2017



Japan Chemical Industry Association

## Chairman's Message

# Chemistry's Contribution to a Sustainable Society



## The Business Environment in 2016

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Although the Japanese economy exhibited some areas of weakness in 2016, such as domestic consumption, it was buoyed by strong expansion in other economies and maintained gradual and stable growth overall. In the chemical industry, steady growth in Asia and other regions improved market conditions and boosted demand. Although the yen appreciated slightly, the business environment was generally favorable.

In May 2016, the Japan Chemical Industry Association (JCIA) transitioned to a new structure and continued its steady efforts guided by the three key themes of securing safety, chemicals management, and contribution to realizing a sustainable society. At the same time, we launched new measures with an eye to the future.

## Efforts to Secure Safety

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Securing safety is the top priority for the chemical industry, and new products and technologies can only generate new value if they are stably produced in safe production facilities. In cooperation with other industry organizations and chemicals companies, JCIA continues to support on-site training that draws on lessons learned from actual accidents, driven by our strong determination to ensure that serious accidents do not recur. As part of these activities, in 2016 we issued the fourth in our series of DVDs on "Lessons from Chemical Plant Accidents", which focuses on preventing accidents during maintenance and inspection of facilities. As well as continuing our industrial safety course, which aims to train core chemical company personnel in the safety management field, we established a new training

program aimed at training production site leaders and enhancing their skills. While supporting such broad-based efforts to raise general skills at site management level, in 2017 we plan to move on to the next step of launching trial operation of accident prediction systems utilizing operational data from plants, which we started examining in 2016, in order to improve the systems' accuracy.

## Chemical Management

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Appropriate management of chemical products in accordance with their properties is essential to maximizing their benefits. To maintain the reliability of chemical products throughout the entire supply chain, in June 2016 we conducted nationwide seminars on the revised Industrial Safety and Health Act, which were attended by not only chemical manufacturers, but also many others from a wide range of industries. In addition to promoting use of the BIGDr risk assessment support tool developed by JCIA, we have been attempting to provide on-demand broadcasting of our Chemical Risk Forum courses for company staff in charge of chemical management on a trial basis, as well as other events responding to market needs.

Great progress was made on the regulatory front, where the Act of Partial Revision of the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. was passed in late May 2017. Accordingly, the national upper limit for the production quantity of new chemical substances was changed under the Special Arrangement in response to industry demands. JCIA will contribute to appropriate operation of the Act by continuing to provide companies with relevant information. At the same time, we will proactively advocate revision of the Act from the viewpoint of reasonable implementation while continuing to ensure the safety of chemical products.

## Contribution to a Sustainable Society

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Moves to achieve a sustainable society are a worldwide trend, and diverse initiatives are currently under way in various fields. We recognize that the role of the chemical industry, which harnesses the power of chemistry to create new substances and discover innovative functions and provides solutions to a wide range of issues, is growing in importance.

For example, expectations are running high that the advanced technologies of Japan's chemical industry will help to counter global warming in many fields, including development of materials that maximize energy conservation and greenhouse gas (GHG) reduction, expansion in the use of renewable energy, and utilization of CO<sub>2</sub> as a raw material. Lively discussion of long-term strategies has taken place since the Paris Agreement came into effect in 2016, and such trends have prompted JCIA to embark on efforts aimed at achieving dramatic reductions in GHG emissions, including developing a vision for Japan's chemical industry in the mid-21st century and identifying priorities for achieving that vision.

In addition to such efforts, we aim to promote public understanding of the chemical industry and raise its profile by broadly publicizing the industry's contributions to achieving Sustainable Development Goals, which provide clear guidance on working towards a sustainable society.

## Harnessing the Strengths of Japan's Chemical Industry

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The strengths of Japan's chemical industry lie not only in its tireless efforts to overcome various challenges and provide high-quality materials that enhance the functionality of finished products, but also in its unified approach to supporting business platforms such as those for responsible care, which voluntarily ensure responsibility for the environment, health, and safety in every process from development to disposal of chemicals. As well as enhancing our RC Integrated Program supporting training to spread such activities throughout the fast-developing Asian region, we will show leadership within international frameworks including the International Council of Chemical Associations and the Japan-China Chemical Industry Conference, and engage with a variety of issues.

While further enhancing our ongoing activities focused on the three key themes outlined above, this year JCIA will proactively support the training of young employees who will be the innovators of the future and communicate the attractions of chemistry to children as we do our utmost to promote the further development of Japan's chemical industry.



**Osamu Ishitobi**  
Chairman  
Japan Chemical Industry Association

# About the Japan Chemical Industry Association

The Japan Chemical Industry Association (JCIA) engages in various activities with the aim of contributing to the sustainable development of human society. It does this by providing value to its members and the public, while at the same time monitoring changes in the environment surrounding the Japanese chemical industry and working with government bodies, related organizations, academic associations, and the International Council of Chemical Associations (ICCA).



## JCIA at a glance

### Name

Japan Chemical Industry Association (JCIA)

### Established

April 1948: JCIA formed as a voluntary association

June 1991: Incorporated as a legal entity

April 2011: Shifted to a general incorporated association

### Mission

JCIA seeks to promote the healthy development of the chemical industry through the research and study of the production, distribution and consumption of materials relating to the chemical industry. JCIA also focuses on the research and study of various issues relating to the technology, labor, environment and chemical safety of the industry, and on planning appropriate measures and actions for the economic prosperity of Japan and the betterment of the national standard of living.

### Activities

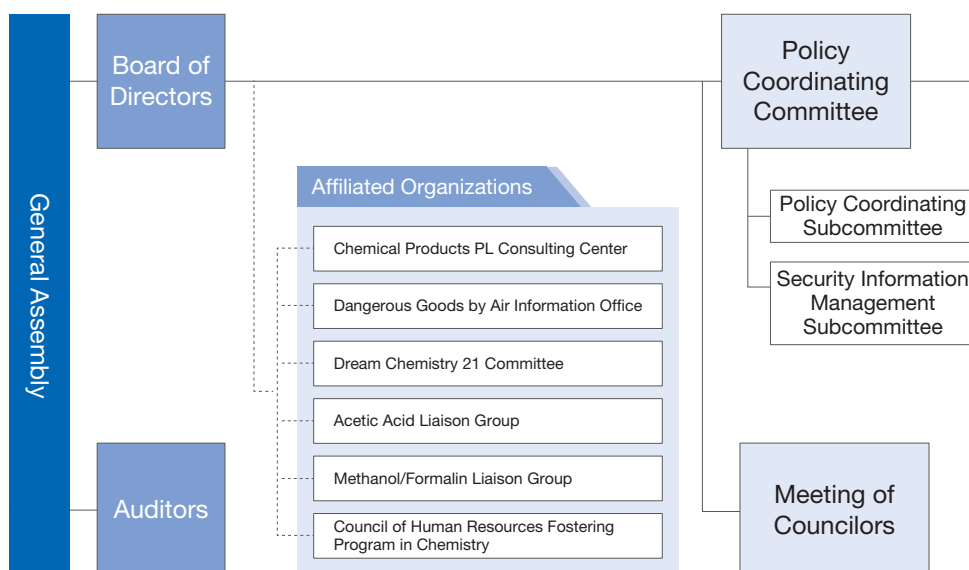
1. Research and study on the production, distribution and consumption of chemical products.
2. Research and study on issues concerning technology, labor, the environment, chemical safety, etc., as well as planning and promoting measures and actions.
3. Commendations for outstanding achievement in new technologies and safety records.
4. Collection and dissemination of information, communication and cooperation with related organizations in Japan and overseas.
5. Public outreach and advocacy activities, workshops and seminars.
6. Other operations in addition to the above that are necessary to achieve JCIA's mission.

### Fiscal Year

From April-1 to March-31 of the following year

## Organizational Chart of JCIA

The Japan Chemical Industry Association (JCIA) is organized into the General Assembly, the Board of Directors, Auditors, the Policy Coordinating Committee, the Meeting of Councilors, business-specific committees and the Secretariat. The General Assembly, which is composed of all JCIA member companies and organizations, is the supreme decision-making body. The Assembly resolves important issues related to JCIA management, as well as the business plan, budget and financial statements. The Board of Directors consists of the Directors and Executive Directors elected from among the member companies and resolves issues related to JCIA business and activities.



## Members of the Japan Chemical Industry Association (As of June 30, 2017)

Chairman (Representative Director)	Osamu Ishitobi	(Sumitomo Chemical Co., Ltd., Chairman of the Board)
Vice Chairman (Representative Director)	Tsutomu Tannowa	(Mitsui Chemicals, Inc., President & CEO)
Vice Chairman (Representative Director)	Michitaka Sawada	(Kao Corporation, Representative Director, President & CEO)
Vice Chairman (Representative Director)	Shinsuke Yoshitaka	(Denka Co., Ltd., Representative Director, Chairman, Board of Directors)
Vice Chairman (Representative Director)	Masanori Ikeda	(NIPPON SHOKUBAI CO., LTD., Member of the Board, Chairman)
Director	Hideki Kobori	(Asahi Kasei Corporation, President & Representative Director)
Director	Kazuhiko Ishimura	(Asahi Glass Co., Ltd., Chairman & Representative Director)
Director	Yuzuru Yamamoto	(Ube Industries, Ltd., President & Representative Director)
Director	Mamoru Kadokura	(KANEKA CORPORATION, President & Representative Director)
Director	Hideo Ichikawa	(Showa Denko K.K., Representative Director, Chairman of the Board)
Director	Teiji Koge	(SEKISUI CHEMICAL CO., LTD., President & Representative Director)
Director	Misao Fudaba	(Daicel Corporation, Representative Director, President and CEO)
Director	Yoshiyuki Nakanishi	(DIC Corporation, Representative Director, President & CEO)
Director	Toshinori Yamamoto	(TOSOH CORPORATION, Representative Director, President)
Director	Masanobu Suzuki	(Nippon Kayaku Co., Ltd., President & Representative Director)
Director	Kenji Sukeno	(FUJIFILM Holdings Corporation, President & COO & Representative Director)
Director	Hitoshi Ochi	(Mitsubishi Chemical Holdings Corporation, Representative CEO, President & CEO)
Director General	Hiroshi Watanabe	(Japan Chemical Industry Association)
Executive Director	Kaoru Sato	(Japan Chemical Industry Association)
Executive Director	Yutaka Haruyama	(Japan Chemical Industry Association)
Executive Director	Kazuya Ishii	(Japan Chemical Industry Association)
Executive Director	Shigeki Nagamatsu	(Japan Chemical Industry Association)
Auditors	Mitsunobu Koshiba	(JSR Corporation, Representative Director & President)
Auditors	Akiharu Kobayashi	(NOF CORPORATION, President & CEO)

## Organizational Chart of the JCIA Secretariat



# Establishment of “Principles of JCIA regarding the Environment, Health and Safety”

The “Principles of JCIA regarding the Environment, Health and Safety” were revised once in 2005, when the Responsible Care Global Charter was established. Then the contents of the principles were reviewed because the Responsible Care Global Charter was revised in 2014 and it emphasized more “action strategies” rather than “ethical concepts.” In addition, under the circumstances where there were changes in the social environment in the 10 years that have passed from the last revision, there was a reason for including keywords and concepts in the contents of strengthening the chemical management

system and reflecting the importance of a contribution to sustainable development from a health point of view. Then the “Principles of JCIA regarding the Environment, Health and Safety” were newly established after approval from the Board of Directors meeting of JCIA that was held on December 16, 2016.

These new principles aim at the further promotion of the positive involvement of management and ensuring the environmental, health, and safety performance of chemicals throughout their lifecycle.

## Principles of the Japan Chemical Industry Association regarding the Environment, Health and Safety

Established on December 16, 2016

Companies engaged in chemical business activities such as production, sales and distribution shall strive to earn greater trust from society by contributing to better quality of life and the creation of a sustainable society. In order to do so, they should safeguard the environment, health and safety throughout the entire lifecycle of chemicals—from development, through manufacturing, to product usage, consumption, recycling and finally to disposal—and continuously improve their efforts in this regard.

To this end, we, the members of Japan Chemical Industry Association, commit to the following basic principles on the environment, health and safety in conducting our business activities:

1. Safeguard the environment, health and safety in domestic and overseas through strong leadership by management.
2. Strive to continually improve environmental, health and safety performance and the security of facilities, processes and technologies throughout the entire chemical lifecycle from development to disposal, and inform society of the results of such efforts.
3. Further reduce consumption of resources and energy and strive to reduce, reuse and recycle wastes.
4. Protect the environment and people’s health and safety by driving continual improvement in chemical product safety and stewardship throughout the supply chain.
5. Strengthen chemicals management systems by participating in the development and implementation of lifecycle-oriented, science-based, and risk-based sound chemical management legislation and best practice.
6. Influence business partners to promote the safe management of chemicals within their own operations.
7. Endeavor to engage in dialogue with local authorities and communities by heeding their concerns regarding the effects of our products and business activities on the environment, health and safety, and by providing them with necessary information to help them understand properly.
8. Further expand dialogue locally, nationally and globally in order to better meet the expectations of stakeholders regarding our efforts with respect to the environment, health and safety.
9. Contribute to the sustainable development of society by developing and providing innovative technologies and other solutions.

# The Three JCIA Awards

## The 41st JCIA Safety Awards

These awards are conferred on chemical facilities that have a strong track record in ensuring safety and are implementing excellent safety initiatives that can serve as a best practice for the industry.

Awards	Members
JCIA Annual Safety Award Grand Prize	Toray Industries, Inc. Chiba Plant
JCIA Annual Safety Award Special Prize	Sumika Covestro Urethane Co., Ltd. Niihama Plant
	Seiko PMC Corporation Chiba Plant
JCIA Annual Safety Award First Prize	Showa Denko Electronics K.K.

### JCIA Annual Safety Award Grand Prize

Toray Industries, Inc.  
Chiba Plant



Plant manager: **Mr. Makoto Miki**

Toray gives top priority to "safety, accident prevention and environmental preservation" in its company policies, and the distinctive feature is its top-down approach to safety management, where "Safety and the Environment" is listed at the top of the corporate guiding principles of the management philosophy. The safety activities of the Chiba plant are characterized by the continued fusion of top-down safety management and bottom-up safety activities of each employee. Our safety activities are not particularly innovative, but each member is working on them persistently and thoroughly. To live up to this award, we will continue to work on safety activities.

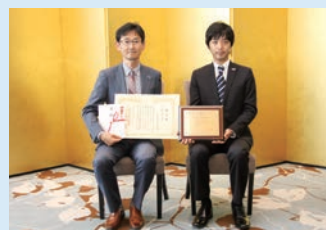
## The 49th Annual JCIA Technology Awards

The JCIA Technology Awards recognize companies that have contributed to the progress of the chemical industry and the economy through the development and industrialization of outstanding chemical technologies. JCIA awards the Grand Prize, Special Technology Prize, and Environmental Technology Prize for selected excellent achievements.

Awards	Members	Awarded Themes
Grand Prize	Toray Industries, Inc.	Development of advanced RO membrane
Special Technology Prize	Kao Corporation	Development of "Visco Top" Rheology Modifier
Environmental Technology Prize	Kurita Water Industries Ltd.	Development and start of sales of "Dream Polymer," which contributes to CO <sub>2</sub> emissions reduction through the maintenance and improvement of boiler efficiency.

### Grand Prize

Toray Industries, Inc.



The Global Environment Research Laboratories Manager: **Mr. Masahiro Kimura**

It is a great honor for us to receive the Grand Prize for the Annual JCIA Technology Awards. I would like to express my deep appreciation for the high evaluation of our advanced Reverse Osmosis (RO) membrane. The advanced RO membrane we have developed has been adopted in water treatment plants all over the world and it has contributed to the solution of the water shortage problem and the industrial development of the world. We will strive to achieve further contributions to the development of society and industry through the creation of advanced materials by utilizing our core technologies such as polymer chemistry and nanotechnology.

## The 11th JCIA Responsible Care (RC) Awards

These awards, which are conferred on individuals or groups that have contributed to spreading and expanding RC activities, are aimed at further motivating and energizing the people engaged in RC activities.

Awards	Members	Awarded Themes
RC Grand Prix Award	Daicel Corporation Himeji Production Sector/Aboshi Plant	Periodical shut-down maintenance where its finished condition is regarded as quality
RC Jury's Special Award	Sumitomo Chemical Co., Ltd. Advanced Materials Development Laboratory Technical Department (RC team)	Improvement of RC Management system
	Asahi Glass Co., Ltd Chiba Factory	Diffusion of Non-technical skill education
RC Outstanding Award	Mitsubishi Chemical Corporation Technical Platform for environmental safety	Training of process safety engineers
	LION CORPORATION CHIBA PLANT	Promoting activities for water environment protection and regional contribution aiming to become a factory that is advanced in water environment protection
	kao Corporation Project for Safety enhancement in Wakayama plant	Security enhancement: Hazard management
RC Award for Effort	KANEKA CORPORATION Kashima Plant, Environmental Protection Safety & Quality assurance Group	According to implementation curricular the "Safety room" training, enhancement of safety first priority and acquirement of technology for safety.

### RC Grand Prix Award

**"Periodical shut-down maintenance where its finished condition is regarded as quality"**

Daicel Corporation  
Himeji Production Sector  
Aboshi Plant



Engineering center Aboshi branch office Mechanical Team Leader: **Mr. Katsuya Maruo**

Thank you very much for the award. It is a great honor for us to receive the RC Grand Prix Award this year. Even though it is a conservative activity, I highly appreciate the high evaluation for our continuous Kaizen activities for obtaining safety and quality of periodic maintenance work with the cooperation of all members. We will continue to improve the level of quality of our periodic maintenance work, and contribute to the improvement of the environment, safety, and health through accident prevention, the safety management of workers, and the minimization of the impact on the environment.



# Activities of JCIA: FY 2016

The following summarizes the main activities of JCIA in FY 2016. We develop activities both in Japan and overseas.

4 Apr.

- RCLG (Responsible Care Leadership Group) meeting/ USA (Miami)/ **RC Dept.**
- Lecture at a Singapore chemical conference/Singapore/ **Int'l Affairs Dept.**
- Release of initial risk assessment tool for hazardous chemical substances/ **Env't & Safety Dept.** [TOPIC 4](#)



JCIA Symposium

5 May

- JCIA Symposium 2016 1st part/Tokyo/ **Dept. of Business/Econ. Info.**
- The 1st children's science experiment class/Tokyo/ **PR Dept.** [TOPIC 1](#)
- Publication of "Responsible Care News, Spring Edition"/ **RC Dept.**
- The 1st Chemical Risk Forum/Tokyo/ **Chem. Mgt. Dept.**
- Publication of "How to have good chemistry with chemical substances"/ **Chem. Mgt. Dept.** [Focus](#)

6 Jun.

- The 2nd Japan Europe Substance Information Committee (JESIC)/Germany (Düsseldorf)/ **Chem. Mgt. Dept.**
- ICCA LRI International workshop/Awaji Island/ **Chem. Mgt. Dept.** [TOPIC 5](#)
- RCIP Overseas supporting activity report meeting/Tokyo/ **RC Dept. (RCIP)**
- Children's science experiment class in Sapporo/Hokkaido/ **PR Dept.** [TOPIC 1](#)
- Japan-EU sector-to-sector meeting/Tokyo/ **Int'l Affairs Dept.**
- JCIA Symposium 2016 2nd part/Tokyo/ **Tech. Dept.** **Dept. of Business/Econ. Info.** **Env't & Safety Dept.** **RC Dept.**
- Lecture of RCIP activities/ **RC Dept. (RCIP)**
- Asia Pacific Responsible Care Organization (APRO) meeting/Thailand (Pattaya)/ **RC Dept.**
- Process safety and RC workshop/Thailand (Pattaya)/ **RC Dept.** [TOPIC 5](#)
- ASEAN GPS Leadership Meeting/Thailand (Pattaya)/ **Chem. Mgt. Dept.**
- The Japanese Society of Toxicology (JSOT), LRI award, Award ceremony/Tokyo/ **Chem. Mgt. Dept.**
- The 2nd Chemical Risk Forum/Tokyo/ **Chem. Mgt. Dept.**



ICCA/LRI workshop

7 Jul.

- Visiting factory in Thailand with workshop participants and reviewing their RC activities/Thailand (Map Ta Phut)/ **RC Dept. (RCIP)**
- Interaction and study meeting for members/Osaka/ **RC Dept.** [Focus](#)
- The 1st JCIA seminar/Tokyo/ **Dept. of Business/Econ. Info.**
- Council of Human Resources Fostering Program in Chemistry, Symposium 2016/Tokyo/ **Labor Dept.**
- Publication of "Chemical Industry of Japan 2016 in Graphs"/ **PR Dept.** [TOPIC 3](#)
- The 1st Risk Assessment Seminar on the Revised Industrial Safety and Health Act (ISHA)/Kawasaki/ **Chem. Mgt. Dept.** [Focus](#)
- The 2nd Risk Assessment Seminar on the Revised Industrial Safety and Health Act (ISHA)/Osaka/ **Chem. Mgt. Dept.** [Focus](#)
- The 2nd children's science experiment class/Tokyo/ **PR Dept.** [TOPIC 1](#)
- Send-off party for the Japanese delegates to the International Chemistry Olympiad Georgia competition/Tokyo/ **PR Dept.** [TOPIC 2](#)
- The 3rd Chemical Risk Forum/Tokyo/ **Chem. Mgt. Dept.**

8 Aug.

- Energy & Climate Change Leadership Group (E&CC LG) meeting/ Tokyo/ **Tech. Dept. (International activity of JCIA)**
- The 3rd Risk Assessment Seminar on the Revised Industrial Safety and Health Act (ISHA)/Osaka/ **Chem. Mgt. Dept.** [Focus](#)
- The promotional lecture on the importance of standardization/Tokyo/ **Tech. Dept.**
- Summer vacation, Chemical experiment shows for children/Tokyo/ **PR Dept.**
- Publication of the "JCIA Annual Report 2016"/ **PR Dept.** [TOPIC 3](#)
- Publication of "Responsible Care News, Summer edition"/ **RC Dept.**
- The 2nd JCIA seminar/Yokohama/ **Dept. of Business/Economic Info.**
- Chemical Policy & Health Leadership Group (CP&H LG) meeting/USA (Midland)/ **Chem. Mgt. Dept.**



Leader Seminars for Production Worksites in Chemical Factories

9 Sep.

- The 2nd Japan-China Chemical Industry Conference/China (Shanghai)/ **Int'l Affairs Dept.** [Focus](#)
- Leader Seminars for Production Worksites in Chemical Factories/Kawasaki/ **Labor Dept.** [TOPIC 1](#)
- The 4th Risk Assessment Seminar on the Revised Industrial Safety and Health Act (ISHA)/Shizuoka/ **Chem. Mgt. Dept.** [Focus](#)
- The 5th Risk Assessment Seminar on the Revised Industrial Safety and Health Act (ISHA)/Nagoya/ **Chem. Mgt. Dept.** [Focus](#)
- Risk communication workshop/Osaka/ **RC Dept.** [Focus](#)
- The 3rd children's science experiment class/Tokyo/ **PR Dept.** [TOPIC 1](#)
- Chemistry Grand Prix awards ceremony/Tokyo/ **PR Dept.** [TOPIC 2](#)
- Jakarta Japan Club networking/Indonesia (Jakarta)/ **RC Dept. (RCIP)**
- Process safety and RC workshop/Indonesia (Jakarta)/ **RC Dept.** [TOPIC 5](#)
- Visiting factory in Indonesia with workshop participants and reviewing their RC activities/Indonesia (Cikampek)/ **RC Dept. (RCIP)**
- The introductory course of Chemical Risk Forum (Live Web Broadcasting)/Kurashiki/ **Chem. Mgt. Dept.** [Focus](#)
- The 4th Chemical Risk Forum/Tokyo/ **Chem. Mgt. Dept.**

2016

4 Apr.

5 May

6 Jun.

7 Jul.

8 Aug.

9 Sep.



10 Oct.



Chemistry Day  
chemical-experiment  
shows for children

● **Chemistry Day, chemical-experiment shows for children/  
Osaka/PR Dept. Focus**

- The 6th Risk Assessment Seminar on the Revised Industrial Safety and Health Act (ISHA)/Sendai/Chem. Mgt. Dept. Focus
- Industrial safety course: sessions 1 to 3/Tokyo/Env't & Safety Dept. TOPIC 1
- Process safety and RC workshop/Myanmar (Yangon)/RC Dept. TOPIC 5
- Seminar for practical use of TPP (Trans Pacific Partnership) Agreement/ Tokyo/Int'l Affairs Dept.
- Leader Seminars for Production Worksites in Chemical Factories/Kawasaki/ Labor Dept. TOPIC 1
- The 7th Risk Assessment Seminar on the Revised Industrial Safety and Health Act (ISHA)/Tokyo/Chem. Mgt. Dept. Focus
- The 5th Chemical Risk Forum/Tokyo/Chem. Mgt. Dept.
- Interaction and study meeting for members/Kurashiki/ RC Dept. Focus
- Responsible Care Local Dialog meeting/Yokkaichi/ RC Dept. TOPIC 1
- Lecture for preventing damage from Tsunami /Tokyo/Env't & Safety Dept. TOPIC 5

2017

2 Feb.

3 Mar.

Student-company exchange meeting



1 Jan.

1 Jan.

● **Fostering Program of Human Resources in Chemistry/  
Student-company exchange meeting/Tokyo/Labor Dept.**

- Industrial safety course: sessions 12 to 14/Tokyo/Env't & Safety Dept. TOPIC 1
- The 10th Risk Assessment Seminar for the Revised Industrial Safety and Health Act (ISHA)/Toyama/Chem. Mgt. Dept. Focus
- Leader Seminars for Production Worksites in Chemical Factories/ Labor Dept. TOPIC 1
- The 5th children's science experiment class/Tokyo/PR Dept. TOPIC 1
- The 11th Risk Assessment Seminar on the Revised Industrial Safety and Health Act (ISHA)/Tokyo/Chem. Mgt. Dept. Focus
- The 3rd JCIA seminar/Tokyo/Dept. of Business/Economic Info.
- QSAR/in silico seminar for chemicals management/Tokyo/Chem. Mgt. Dept.
- The 8th Chemical Risk Forum/Tokyo/Chem. Mgt. Dept.
- Special lecture for "Theory of the Chemical industry"/Osaka/ Fostering Program of Human Resources in Chemistry TOPIC 2

10 Oct.

11 Nov.

● **Safety management workshop on dangerous substances transportation/  
Tokyo, Osaka/Env't & Safety Dept. TOPIC 6**

- Industrial safety course: sessions 4 to 8/Tokyo/Env't & Safety Dept. TOPIC 1
- ASEAN GPS Leadership Meeting/Malaysia (Kuala Lumpur)/Chem. Mgt. Dept.
- ASEAN Regulatory Cooperation Workshop/Malaysia (Kuala Lumpur)/Chem. Mgt. Dept. TOPIC 3
- The 3rd Japan Europe Substance Information Committee (JESIC)/Germany (Düsseldorf)/ Chem. Mgt. Dept.
- Risk assessment tool training session/Tokyo/Chem. Mgt. Dept.
- Fostering Program of Human Resources in Chemistry, Industry-academia exchange meeting 2016/Tokyo/Labor Dept.
- The Japanese Society for Alternatives to Animal Experiments. LRI awards ceremony/Fukuoka/Chem. Mgt. Dept.
- Seminar for anti-dumping/Tokyo/Int'l Affairs Dept.
- The 4th children's science experiment class/Tokyo/PR Dept. TOPIC 1
- Publication of "Responsible Care News, Autumn edition"/RC Dept.
- The 6th Chemical Risk Forum/Tokyo/Chem. Mgt. Dept.
- Responsible Care Local Dialog meetings/Osaka, Eastern Yamaguchi/ RC Dept. TOPIC 1
- RCLG (Responsible Care Leadership Group) meeting/Brazil (Salvador)/RC Dept.
- GASG steering committee international meeting/Tokyo/ Chem. Mgt. Dept. TOPIC 4



RCLG meeting/Brazil

2 Feb.

● **Responsible Care Local Dialog meeting/Chiba, Hyogo,  
Kashima, Aichi/RC Dept. TOPIC 1**

- Fostering Program of Human Resources in Chemistry/Student-company exchange meeting/Osaka/Labor Dept.
- Industrial safety course: sessions 15/Tokyo/Env't & Safety Dept. TOPIC 1
- Publication of "Responsible Care News, Winter Edition"/RC Dept.
- Interaction and study meeting for members/Kawasaki/RC Dept. Focus
- Seminar for chemical management (Practice of GPS/JIPS)/Tokyo/Chem. Mgt. Dept.
- The 9th Chemical Risk Forum/Tokyo/Chem. Mgt. Dept.

12 Dec.

● **Industrial safety course: sessions 9 to 11/Tokyo/  
Env't & Safety Dept. TOPIC 1**

- The 8th Risk Assessment Seminar on the Revised Industrial Safety and Health Act (ISHA)/Hakata/Chem. Mgt. Dept. Focus
- The 9th Risk Assessment Seminar on the Revised Industrial Safety and Health Act (ISHA)/Hiroshima/Chem. Mgt. Dept. Focus
- The 7th Annual Meeting of Korea and Japan/Nagoya/Int'l Affairs Dept. TOPIC 1
- Risk assessment tool training session/Tokyo/Chem. Mgt. Dept.
- The 7th Chemical Risk Forum/Tokyo/Chem. Mgt. Dept.
- Communication with consumers for RC/Osaka, Yokohama/RC Dept. TOPIC 6
- Responsible Care activity report meeting/Tokyo, Osaka/RC Dept. TOPIC 2
- Released "Lessons from Chemical Plant Accidents; Vol. 4" / Env't & Safety Dept. TOPIC 3

3 Mar.

● **The 10th Chemical Risk Forum/Tokyo/Chem. Mgt. Dept.**

- Seminar for chemical management (Practice of GPS/JIPS)/Osaka/ Chem. Mgt. Dept.
- GPS/JIPS seminar on risk assessment of mixture/Tokyo/Chem. Mgt. Dept.
- The introductory course of Chemical Risk Forum (Live Web Broadcasting)/Tokyo/ Chem. Mgt. Dept. Focus
- The 6th children's science experiment class/Tokyo/PR Dept. TOPIC 1
- Responsible Care Local Dialog meeting/Okayama/RC Dept. TOPIC 1
- E&CC LG (Energy & Climate Change Leadership Group) meeting/Belgium (Brussels)/Tech. Dept. (International activity of JCIA)
- CP&H LG (Chemical Policy & Health Leadership Group)meeting/Germany (Berlin)/Chem. Mgt. Dept. (International activity of JCIA)

# Activity Report: Responsible Care (RC) Committee

[Responsible Care Department]

## Message

### Boosting the presence of the chemical industry through continuous improvement and enhancement of public recognition of RC activities

Based on the idea of making a “Contribution to realizing a sustainable society,” we conduct activities to enhance the presence of the chemical industry that are active and open to the public. Specifically, we will proceed with the continuous improvement of RC activities and the enhancement of public recognition of RC activities through the penetration of the “Principles of JCIA regarding the Environment, Health and Safety,” which were established in accordance with the spirit of RC. In other Asian countries, we are encouraging Japanese companies to participate in local RC activities and support each country’s RC activities. By doing so, we support the activation and expansion of local RC activities.

Shigeru Ueyama, Committee Chairman [Executive Officer, Kao Corporation]



## Focus

### | Focus 1

#### “Interaction and study meeting for members” where members can share RC information with other members

The “Interaction and study meetings for members” is a place where members can exchange their RC activities and opinions with other members. Its purpose is to solve the problems they face, or for members to get to know each other. In 2016, the meetings were held in Osaka, Kurashiki, and Kawasaki. In Osaka, we adopted the World Cafe Methodology\*, and we have discussed and exchanged opinions on three themes such as “How can we gain recognition of RC activities from the whole company?” “How can we construct a corporate culture for safety?” and “How can we make our RC activities known to the public?” We have received many opinions from participants that the meeting was useful because they could meet and exchange opinions with many people from other companies. We will hold another meeting with appropriate themes in the future, and hope to contribute to the improvement of RC

activities.



\*“World Cafe” is a methodology where a small group of four to five members discuss one topic, then all members other than the table host move to another table and discuss another topic with another table host. Eventually, the effect is as if all members have discussed all topics. In 1995, this method was founded in the USA. Presently, it is widely performed in Japan.

### | Focus 2

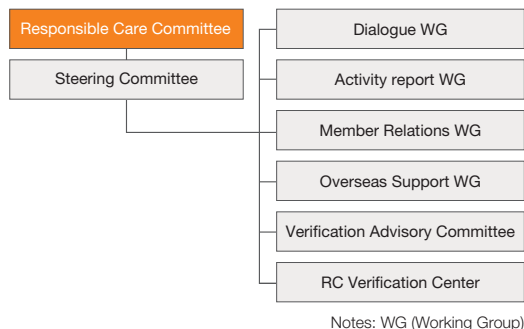
#### Task force for the study of contribution to SDGs (Sustainable Development Goals) of the chemical industry

The concept of “Sustainable Development” was widely known to society as a result of the United Nations Rio Earth Summit 1992, and then in 2015, SDGs were adopted in the United Nations as specific milestones. In the International Council of Chemical Associations (ICCA), there are lively discussions on the role of RC activities in “Sustainable Development.” In response to these discussions, JCIA formed a task force in January of 2017, in which five member companies have participated. This task force has had many discussions about the Japanese chemical industry’s contributions to the SDGs. The task force has reviewed the history of the Japanese

chemical industry, and its strong points obtained from it. To contribute to SDGs as a “guide for all industries” by integrating business activities for growth and fundamental activities such as RC activities into management, the task force has set the following three visions for SDGs. “Creating innovation through the power of chemistry,” “Support for global action for environmental and safety problems,” and “Accelerating contribution to SDGs by the chemical industry through communication with stakeholders.” These visions were announced at the RC leadership group meeting of ICCA held in March 2017.

## Activity Outline

The purposes of the Responsible Care Committee are supporting member's RC activities, raising the trust in our members and the chemical industry from society, and contributing to the sustainable development of the chemical industry and society. To this end, the committee focuses its efforts on the continuous improvement of RC activities, raising public awareness of such activities, and the provision of support to promote and expand RC activities.



### TOPIC 1

## Responsible Care Local Dialog Meetings

In 2016, we held Responsible Care Local Dialog Meetings in eight cities such as Osaka, Eastern Yamaguchi, Chiba, Kashima, Hyogo, Aichi, and Okayama. 90 to 230 people participated in these meetings, and the themes discussed there were process safety and disaster prevention, preparations for natural disasters such as earthquakes and environmental protection.



### TOPIC 2

## Responsible Care activity report meeting

To let people widely know our RC activities, in December 2016, RC activity report meetings were held in Tokyo and Osaka. The meetings featured presentations of the RC activity reports of four member companies, and a lecture by Mr. Noboru Furusawa (the representative of "Supporting organization of safety and human resource development").



### TOPIC 3

## Verification activities

Verification activities are aimed at improving the quality and reliability of RC activities. In 2016, we verified 11 reports including one newly started activity, and have now examined a total of 196 cases.

### TOPIC 4

## Reporting simulation based on ICCA Process Safety Metrics (PSM)

In response to the enactment of process safety metrics (PSM) which are common for members of the International Council of Chemical Associations (ICCA), JCIA has started reporting simulations based on new metrics. We have obtained useful data from 63 companies (about three-quarters of all relevant companies), even though the responses were voluntary.

### TOPIC 5

## Support for RC activities in Asian countries

This year, we held process safety and RC workshops in three countries in Asia, namely Thailand, Indonesia, and Myanmar. We conducted lectures and practices for process safety based on actual incidents, as well as educational sessions for PSM of ICCA.

### TOPIC 6

## Communication with consumers for RC

As continued from last year, meetings to communicate with consumers, which had been well received, were held with the cooperation of the member companies. The meetings included plant tours of member companies, and were held in plants in the Osaka area on December 7, and Yokohama plants in the Tokyo area on December 14.



# Activity Report: Environment and Safety Committee

[Environment and Safety Department]

## Message

### Securing safety is the top priority of the chemical industry

The Environment and Safety Committee regards prevention of process safety incidents (PSI) and work-related accidents as prioritized themes, and supports the further safety activities of each member company. We have issued the "Safety and Accident Prevention Guidelines" booklet with the purpose of preventing the recurrence of recent serious chemical plant accidents, and we support the prevention of PSI and the prevention of work-related accidents by holding seminars and workshop using educational DVDs based on the aforementioned guidelines.

**Makoto Aikawa**, Committee Chairman [Executive Officer, Ube Industries, Ltd.]



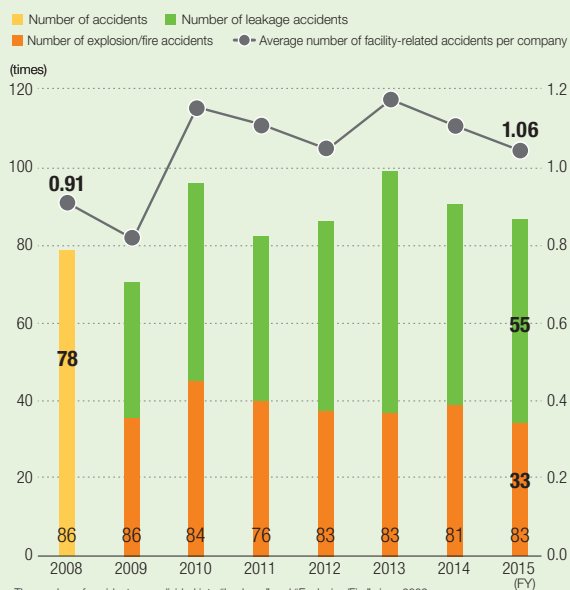
## Focus

### Approach for Prevention of Process Safety Incidents (PSI) and Prevention of Work-related Accidents

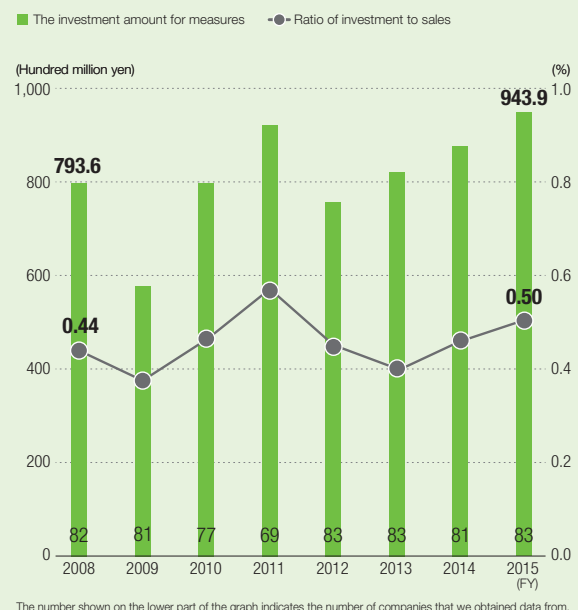
Reflecting the contents of the government announcement of the "Promotion of the prevention of PSI measures for facilities such as petrochemical complexes," we carry out our safety activities based on JCIA's priority policy of "Approach for maintaining safety." Even though the number of accidents at member companies has not dropped, we will continue our activities. Specifically, we have been conducting PSI prevention activities that make use of the "Safety and Accident Prevention Guidelines" booklet and educational DVD, and the measure for mandatory of risk assessment by the introduction and use the

initial risk assessment tool for hazardous chemical substances. In addition, we positively communicate and cooperate with other industries and organizations, because the prevention of PSI and the prevention of work-related accidents are common issues for all business fields. For the issue of the transmission of skills and human resource development, which is one of the causes of serious accidents, we provide our guideline booklets to other organizations, and they are used as a textbook in their seminar and training sessions.

#### Facility Accident Occurrences (Explosion, Fire, Leakage, etc.)

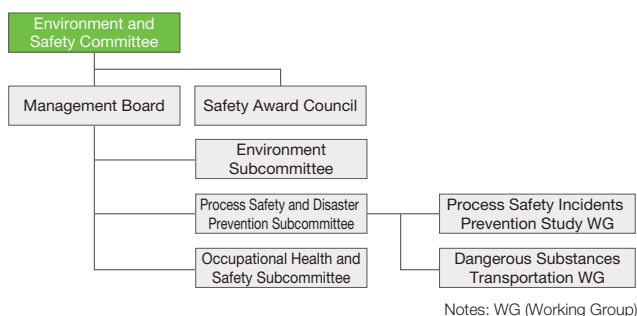


#### Investment in safety, process safety and disaster prevention



## Activity Outline

The committee keeps track of the latest domestic and international trend in issues related to process safety and disaster prevention, environment and occupational safety in the chemical industry, and provide information to member companies. We also collect and summarize opinions for national policy from the industry, and make suggestions to the government. For prevention of PSI and the prevention of occupational accidents, we offer support by holding seminars using these training materials and by providing a guideline booklet and DVD that the committee has prepared. We also collaborate with other industrial organizations and academic societies, and support the transmission of skills and human resource development.



### TOPIC 1

## Industrial safety course

Following the holding of sessions in 2015, we have co-hosted the “Industry safety course” with the Petroleum Association of Japan and the Japan Petrochemical Industry Association since October 2016. We also tried to enhance the process safety capabilities of Member Companies. Twenty out of a total of thirty-three participants have achieved perfect attendance, an increase from last year’s ten. This was due to the higher recognition of the Industrial safety course and the support of participants from member companies. We could recognize the positive attitude and higher safety consciousness of participants.



### TOPIC 2

## Responses to Regulations for Water Quality, Air Pollution, and Soil Contamination

Considering the regulations of the Ministry of the Environment, we have exchanged opinions with people from major industrial organizations, and we have summarized member opinions through the Environment Subcommittee and positively made proposals to administrative authorities.

### [Main Themes]

**Water quality...** Measures for the 8th regulations for the total amount of pollutant emissions, and Whole Effluent Toxicity (WET) testing

**Air pollution...** Mitigation of mercury emissions to the air, Measures against particulate matter (PM 2.5) and photochemical oxidants

**Soil contamination...** Preparation for amendment of the Soil Contamination Countermeasures Act

### TOPIC 3

## Lesson from Chemical Plant Accidents ; Vol. 4 (Japanese/English editions)



We have started providing educational DVD Vol. 4 titled “Safety and Accident Prevention Guidelines (additional print-1)” in both Japanese and English editions, which JCIA has supervised. In Vol. 4, a case study of an actual accident during facility maintenance work is focused and important lessons for the prevention of recurrence are summarized in 10 minutes.

### TOPIC 4

## Actions for reduction of occupational accidents

The committee comprehended the contents of the administrative committee and the amendment of the law regarding domestic occupational health and safety, provided this information to members and then summarized member opinions and requests about it. The Occupational Health and Safety Subcommittee has produced an occupational health and safety survey report based on information collected from members. The committee provided this report to member companies and helped with the occupational accident prevention activities of members. In addition, the committee has made the “initial risk assessment tool for hazardous chemical substances” open to the public and positively supports preparation for risk assessment to be made mandatory.

### TOPIC 5

## Lecture for preventing damage from Tsunami

In 2015, the United Nations established the 5th of November as “World Tsunami Awareness Day.” Upon this move, we co-hosted the “Lecture for preventing damage from Tsunami” on October 31 with the Petroleum Association of Japan and the Japan Petrochemical Industry Association. In the lecture, we discussed the three themes of “General information on countermeasures for disasters in Japan” (the Cabinet Office), “Countermeasures for Tsunami disasters from the perspective of Ports and Harbors” and “Road disaster prevention” (Ministry of Land, Information, Transport and Tourism). The lecture was very useful for participants, who acquired a wide range of knowledge on disaster prevention.

### TOPIC 6

## Safety Management Workshop on Dangerous substance transportation

“Lectures on safety management in dangerous substance transportation” were held in Tokyo and Osaka in November. A total of approximately 270 participants from various organizations including manufacturers (shippers), the transportation sector, administrative offices, and related organizations came together. Recently, in dangerous substance transportation, the requirements for the management responsibility of the shippers have increased, and accordingly the knowledge that must be learned are increasing as well. We will enhance the contents and continuously hold lectures for this theme.

# Activity Report: Chemicals Management Committee

## [Chemicals Management Department]

### Message

#### Efforts toward Firm Establishment of Chemicals Management as a Business Strategy

The Chemicals Management Committee develops a variety of different activities, including the provision of chemical management information to members under the basic policy of strengthening support for chemical management and the promotion and expansion of voluntary risk-based chemical management activities by the chemical industry. In particular, we started live web broadcasting of the chemical risk forum for the first time from the viewpoint of strengthening the support for regional enterprises and SME members. We will be working to maintain these activities.

Akio Ueda, Committee Chairman [Representative Director & Senior Managing Executive Officer, Mitsubishi Chemical Corporation]



### Focus

#### Promotion of Risk-Based Chemical Management

The concept of risk-based chemical management proposed by the United Nations Environment Programme (UNEP) is reflected in the legal restrictions of various nations around the world, while the voluntary chemical management efforts by industries are playing an essential role for promoting proper management. In Japan, the management to protect workers, the environment and consumers in the entire supply chain is promoted under the framework of GPS/JIPS modified from the “Global Product Strategy (GPS)” announced by the International Council of Chemical Associations (ICCA) to conform to the conditions of Japan.

#### Promotion Activities through Chemical Risk Assessment Seminars across Japan

The revised Industrial Safety and Health Act enforced since June 2016 requires the implementation of risk assessment for workers to all businesses that produce or deal with any of the 663 specific chemical substances. JCIA held the “Risk Assessment Seminar on the Revised Industrial Safety and Health Act” targeting managers and a persons in charge of chemical management in 11 places across Japan. More than 500 people (non-member ratio 70%) took part in the seminar from not only chemical manufacturers but also from a wide variety of industries, and the seminar was well-received as an opportunity for learning the methodology.



#### “How to have good chemistry with chemical substances” Publication of GPS/JIPS Promotion Brochure

A brochure was published in May for customer companies of the chemical industry introducing the basic concept of GPS/JIPS, the importance of the “Risk-Based Management of Chemicals in the Entire Supply Chain” and the chemical industry’s efforts to derive the maximum benefit with risk minimization. Familiar chemicals are employed as examples for explanation to make it possible to be understood by non-specialists on chemical management.



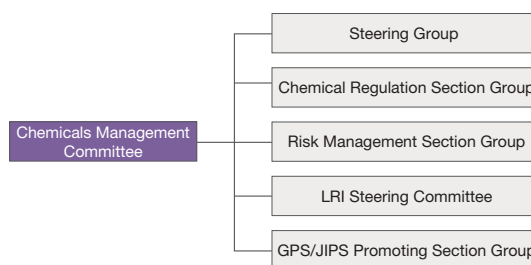
#### Live Web Broadcasting of the introductory course of the Chemical Risk Forum

JCIA organized an introductory course of the Chemical Risk Forum to provide basic knowledge on chemical management to those who had just started working in this field. The program was held and delivered its live web broadcast for the first time in March 2017. There were 80 visitors in the venue and 120 viewers, for a total of approximately 200 participants.



## Activity Outline

The committee cultivates close ties with regulatory authorities and other administrative bodies to actively gather, analyze and communicate information pertaining to domestic and overseas regulatory trends for chemicals management that members truly require and find helpful. In addition, we gather members' opinions and requests, and submit them to regulatory authorities. As part of its independent initiatives in the industry, the committee is proactively promoting GPS/JIPS activities, tackling new issues, and supporting research and technology evaluations related to chemical risk assessment methods.



### TOPIC 1

## Efforts on Amended CSCL

A review of the CSCL has been under preparation since 2015, and a revised bill was passed by the Diet in May 2017 and promulgated in June. A major point of the amendment in the confirmation scheme of small volume/low volume for new chemicals was that the domestic upper limit was changed from the manufactured and imported amount to the amount of environmental emissions in consideration of risk.

Before the amendment, some companies could not achieve the planned amount due to the adjustment made by the government and lost business opportunities. In the amended act, the opinions of industry were reflected in such a way that the achievement of the amount (1 ton) per company has become easier for substances with low environmental emissions, and as such this is expected to be a reasonable system that will support innovation toward the creation of new products in the increasing production of low-volume, high-mix functional products.

### TOPIC 2

## Response to Amendment of TSCA/USA

In the USA, the Toxic Substances Control Act (TSCA) was amended for the first time in about last 40 years and enforced in June 2016. The main aim of the amendment was the strengthening of risk management of existing chemicals, and some new processes such as the grasping of existing chemicals with actual manufacturing/importing (inventory reset) and the chemicals prioritization for risk evaluation, etc., will be implemented. Simultaneously, the judgment criteria for new chemicals were reviewed. As well as strengthening the restrictions, it contains increased burdens for business operators. JCIA is acquiring the latest information through the American Chemistry Council (ACC) and affiliated local law firms in the USA and providing them to members, and offering opinions to the authorities in the US for a more reasonable process with reduced burdens to business operators.

### TOPIC 3

## ASEAN Regulatory Cooperation Project

This project started in 2015, and a two-day workshop was held in Malaysia with government officials from major nations in 2016. The workshop began with sharing successful examples of regulatory cooperation followed by open discussions between participants from both the industry and government sides regarding the immediate issues on the regulations related to chemicals and how to implement sound chemical management. Through break-out sessions, an agreement was made to continue this activity to launch working groups for solving the issues.



### TOPIC 4

## Chemicals Management in Supply Chain

For the chemicals management in the entire supply chain, JCIA has been leading the role of the maintenance and management of the "GADSL\*1" list of substances, which influences business operators globally around this industry. In view of the amendment of GADSL scheduled in February 2017, the GASG\*2 Steering Committee international meeting was held in November 2016 in Tokyo, in which active discussions were made regarding the direction of the amendment on GADSL under the emerging regulatory landscape in Japan, the USA and Europe.



\*1 Global Automotive Declarable Substance List

\*2 Global Automotive Stakeholders Group

TOPIC  
5

## ICCA LRI International Workshop

The ICCA LRI International Workshop was held for the first time in Japan in June 2016 at the Awaji Yumebutai International Conference Center, with 150 participants including 42 from 15 nations overseas. The workshop theme was “Meeting the Global Challenge of Applying New Scientific Methods to Improve Environmental and Human Health Risk Assessments.” The pre-workshop featured three educational sessions. The workshop opened with plenary presentations of topics in Japan, the USA and Europe. Substantive workshop topics were discussed in four concurrent sessions. The workshop concluded with a panel discussion. There were many positive opinions such as “The ICCA LRI should be the core for promoting a global challenge,” “New technology currently requires fusion with different fields, therefore contact with relevant academic conferences should be promoted as well,” “Newly-developing countries are the best regions for adopting new technologies and the fostering of human resources is required,” etc.



TOPIC  
6

## Trends of Poisonous and Deleterious Substances Control Act/GHS in Japan

JCIA has been offering opinions to the regulatory authorities based on requests for improvement by business operators regarding the operation of the PDS Control Act. As a result, some opinions were reflected in forms such as an amendment of judgment criteria in the PDS Control Act and a significant enhancement of Q&A. Furthermore, an investigation for a review is underway after a lapse of five years from the amendment of JIS (Japanese Industrial Standards) relevant to GHS that forms the key for communicating hazard information on chemicals in Japan, and the main part of the next amendment will be a reflection of the contents of the currently latest edition (version 6) of the GHS document of the United Nations. JCIA participated in the preparation of the “Rough Draft” as one of the draft preparing associations for JIS and reflected opinions on the amendment offered by many of the members. Further investigation will be carried out by the “JIS Drafting Committee” operated by JCIA as a bureau.

TOPIC  
7

## Development of “BIGDr. Worker” Chemical Risk Evaluation Supporting Tool

After the enforcement of the Revised Industrial Safety and Health Act in June 2016, when using any of the designated 663 chemical substances, the risk evaluation for workers by all business operators was obligated. JCIA has developed a tool named “BIGDr. Worker” that provides a sophisticated evaluation with simple operation aiming at support for risk evaluation conducted by midstream and downstream business operators. The adopted ECETOC TRA method proven as a quantitative risk evaluation method will provide the risk evaluation by assuming the exposure concentration at the worksites.

## AWARDS

### JCIA LRI Award in Japanese Society for Alternatives to Animal Experiments (JSAAE)

The winner of the first JCIA LRI Award set up in JSAAE was Dr. Takashi Omori, a professor of the Clinical & Translational Research Center, Kobe University Hospital, for his excellent performance and research work done on the “Refinement of the assay interpretation based on the median value in the JaCVAM international validation study on Comet assay.” The awards ceremony was held on November 18, 2016, at the 29th annual meeting of the society in Kyushu University.



### 2016 JIPS Award

The “JIPS Award” was established in 2016 for the promotion of JIPS activities.

The awards ceremony was held in the 90th Chemicals Management Committee (February 21). KAO Corporation, which released the highest number of Safety Summaries (GSS), won the grand prize. Sekisui Chemical Co., Ltd., Lion Corporation and DIC Corporation, which released GSS for the first time, won the incentive prizes.



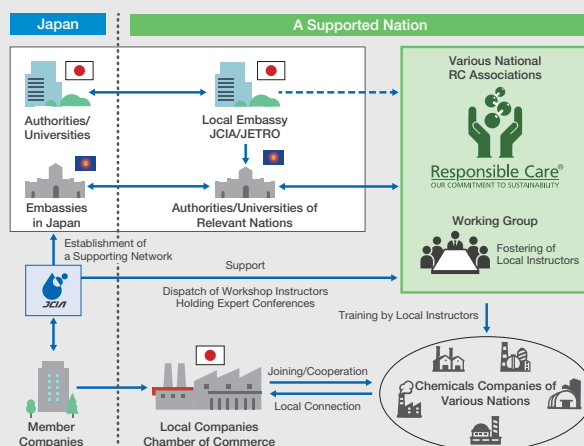
Left: Mr. Hiromitsu Hayashi, KAO Corporation  
Right: Mr. Masanori Karatsu, former Committee Chairperson of Chemicals Management Committee



# JCIA's cross-functional initiatives in international support Responsible Care Integrated Program (RCIP)

Through the RC Asia Supporting Activities utilizing RCIP since 2014, workshops regarding environment and safety, chemical management and RC were implemented responding to the needs of member's affiliate local companies, the government and the chemical industry associations of each countries. Furthermore, JCIA grasped the local situations through visits to the plants of Japanese companies, etc.

As a result, a relationship of mutual trust has been established between the chemical industry associations and the chemical divisions of the local Japanese Chamber of Commerce, facilitating communication with the local government and the relevant organizations of the Japanese government, and the RC activities of JCIA are becoming widely recognized overseas.



## 1) RCIP's Overseas Supporting Activities

As well as giving a lecture, JCIA sponsored a characteristic participatory workshop with group discussions and performance presentations by the attendants that focused on case studies of incidents at the workplaces. Furthermore, JCIA provided the DVD "For Prevention of Work-Related Accidents" with Thai subtitles in response to the demand for content-rich training materials. The lecture and the workshop were also provided in Indonesia in September. The proactive attendants enjoyed the participatory workshop, and the activities ended up in a productive atmosphere.



Workshop (Thailand)

## 2) Information Collection Overseas

JCIA visited local governments and embassies and introduced overseas support activities by RCIP. In Vietnam, JCIA took part in a seminar on safety by Yokohama National University and University of Da Nang and created a good relationship allowing information exchange with local institutions by providing a lecture introducing the safety activities of private companies, etc.

## 3) Lecture of RCIP activities at Japanese Chamber of Commerce, Bangkok

In Thailand, JCIA co-hosted an RC lecture with Japanese Chamber of Commerce, Bangkok and made it a good opportunity for making the RCIP activities of JCIA widely known to Japanese-affiliated companies.



Lecture at Japanese Chamber of Commerce, Bangkok

## 4) RCIP Overseas Supporting Activity Report Meeting in Japan

JCIA introduced the performance of RC overseas support activities in ASEAN to persons in charge of RC overseas support in JCIA member companies.



RC overseas support activity report meeting

A further step forward in activities is planned with the establishment of an overseas support working group under the RC committee, taking the result of RC overseas support activities continued by RCIP for 3 years since 2014 as an opportunity for moving forward.

# Activity Report: Technical Affairs Committee

[Technical Affairs Department]

## Message

### The Chemical Industry as a Solution Provider for Global Warming Countermeasures

Stronger encouragement is being made for industry to take on the challenge of global warming after the Paris Agreement. This effort is essential for cutting down the high energy consumption in the manufacturing processes of the chemical industry, while the contribution of components and products that were supplied to the market from the chemical industry as final products to the reduction of greenhouse gas is attracting attention. From the perspective of the chemical industry, we will commit to continued efforts for providing further solutions with innovation as the key.

**Tadashi Hiraoka**, Committee Chairman [Executive Officer, Asahi Glass Co., Ltd.]



## Focus

### Paris Agreement and Global Warming Countermeasures

In November 2016, the Paris Agreement came into effect and the challenge of global warming countermeasures by the entire world has commenced in a cooperative way. Under the Paris Agreement, all nations should determine the nationally determined contribution (NDC).

Japan determined a greenhouse gas reduction goal of -26.0% compared to FY 2013 by FY 2030, and is taking on the Global Warming Countermeasure Plan (cabinet decision in May 2016) for realizing this goal.

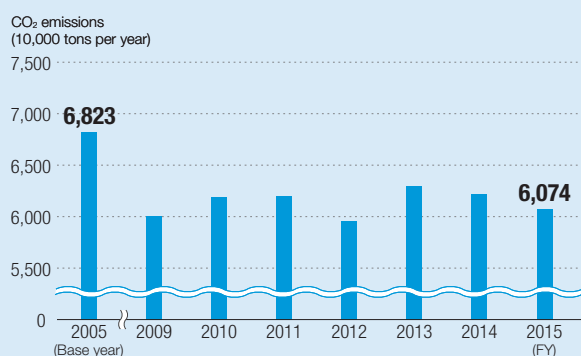
JCIA started to address this issue from the era of the Keidanren Voluntary Action Plan on the Environment and has continued efforts since 2013 as Keidanren's Commitment to a Low Carbon Society.

In Keidanren's Commitment to a Low Carbon Society,

- Reduction within enterprise activities in Japan (BAU comparison basis reduction of CO<sub>2</sub>)
- Low Carbon Products: Reduction in other business segments such as servicing, etc.
- Overseas contribution to reduction
- Development/introduction of innovative technologies

The efforts are being made based on this 4-pronged strategy.

#### CO<sub>2</sub> emissions by companies participating in Keidanren's Commitment to a Low Carbon Society (FY 2014–FY 2015)



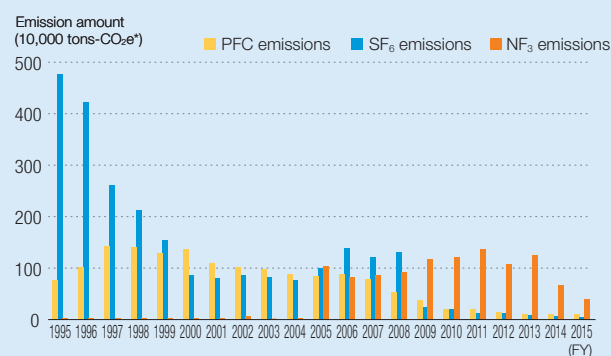
Number of Participated Parties: 343 Companies, 2 Associations

Furthermore, the submission of "Long-Term Low Greenhouse Gas Emission Development Strategies" up to 2020 is requested under the Paris Agreement, and accordingly discussions have been made by the administration in the "Long-Term Global Warming Countermeasure Platform (including the taskforce under it)" (METI) and the "Long-Term Low Carbon Vision Sub-Committee" (MOE).

JCIA also established a Global Warming Long-Term Strategy Study Working Group, conducted several studies with the participation of relevant organizations and experts, in addition to the member companies, and summarized the "long-term strategy to provide solutions for global warming." The document also stresses that, in addition to the promotion of the reduction of emissions in our own manufacturing processes, it is essential to cooperate with downstream industries to contribute to the global warming countermeasures in the stage of the use of manufactured products/components.

The chemical industry will enhance its presence as an industry that provides solutions to global warming through innovation.

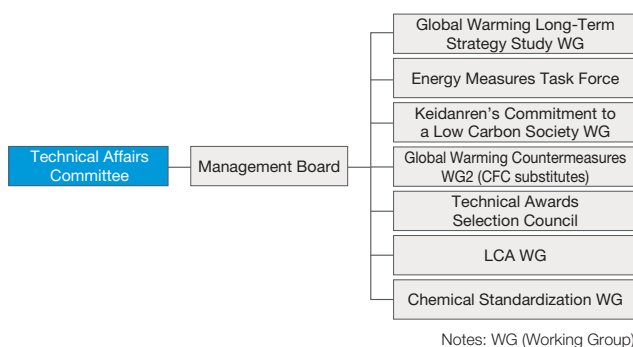
#### PFCs, SF<sub>6</sub>, and NF<sub>3</sub> emitted from manufacturing processes



\*CO<sub>2</sub>e: CO<sub>2</sub> Equivalent

## Activity Outline

JCIA is taking on the challenge of the reduction of greenhouse gas emissions through efforts such as participating in Keidanren's Commitment to a Low Carbon Society and reporting the summary of achievements by member companies to the Keidanren every year, etc. It also prepares business practice for voluntary assessment regarding small-scale thermal power systems and takes administrative actions such as reporting to the Measurement Administration Council on behalf of entire industries. Furthermore, it also gathers out information collection regarding standardization, intellectual property and the protection of business confidentiality and providing information to members.



### TOPIC 1 The 48<sup>th</sup> Annual JCIA Technology Awards Grand Prize awarded for the Ichimura Prize in Industry for Outstanding Achievement!

Every year JCIA nominates the themes for the Annual JCIA Technology Awards Grand Prize for the Ichimura Prize in Industry of the New Technology Development Foundation. In FY 2016, under the nomination from JCIA, the “Development of a Special Polycarbonate Resin with High Refraction Index/Low Double Reflex” won the Ichimura Prize in Industry for Outstanding Achievement, the highest prize. We will continuously help the contribution of the chemical industry to the economic and social advancement of our nation through awarding of innovative and excellent science/technologies and products.

### TOPIC 2 Promotion and Edification of cLCA\*1 Activities

JCIA is promoting efforts to evaluate and quantitatively indicate the contribution of chemical products to the reduction of greenhouse gas emissions by final products using the cLCA method. We have summarized concepts, guidelines, evaluation results, etc., as well as published a pamphlet titled “A New Perspective Toward the Reduction of Greenhouse Gases,” and posted them on the website of JCIA. Recently a new page on the pamphlet was created with case examples. The contents will be further upgraded with a series of postings on products after evaluation.

### TOPIC 3 Activities of JCIA are Posted in the Voluntary Environmental Assessment “A Collection of Practical Operations” Published by MOE

Preparation work for a collection of practical operations was carried out by MOE for voluntary assessment of small-scale thermal power plants. JCIA provided explanation to MOE mainly on its RC activities, which was introduced as “Case Examples of Constant Communication with Residents, etc.”

### TOPIC 4 Activities in LCA\*2 Japan Forum

JCIA is engaged in the Life Cycle Assessment Society of Japan (JLCA) activities as one of the cLCA activities. A lecture titled “Contribution to Reduction of GHG Emissions from Chemical Products” was held during the commemorative seminar for the general assembly in July 2016. A senior expert of JCIA was awarded a merit prize in the general assembly held in February 2017.



### TOPIC 5 Efforts for Amendment of JIS (Color in Hazen Units)

In response to the amendment of international standard ISO6271, revision of JIS K0071-1 (color in Hazen units) was started, to change the measuring method to add a colorimeter measurement, JCIA, a draft developing association of the JIS, prepared a draft amendment with a measuring method using an instrument in addition to the current visual measurement method. The members of the committee selected from the relevant companies and associations participated in developing the draft JIS concentratedly during a short period. It will be published within FY 2017 after verification by the Japanese Industrial Standards Committee.

\*1 cLCA: carbon Life Cycle Analysis

\*2 LCA: Life Cycle Assessment

# Activity Report: Labor Committee

[Labor Department]

## Message

### Continual Promotion of Support for Member Companies on Human Resource Development

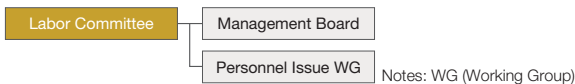
The working group activities on personnel issues were implemented with the theme “Future human resource Strategies in Chemical Enterprises” in FY 2016 and suggestions to the chemical industry were summarized. For human resource development, a staff fostering seminar for the staff members of personnel and labor affairs was held and Leader Seminars for Production Worksites in Chemical Factories were implemented as a new plan. The Leader Seminar is planned to be held several times in this FY and the support for the fostering of human resources will be promoted for the member companies.

**Soichiro Hashizume**, Committee Chairman [Director & Lead Executive Officer, Asahi Kasei Corporation]



## Activity Outline

The committee held various seminars including personnel/labor affair staff fostering, the fostering of human resources through workshops and offering opinions on labor-related programs/law amendments in cooperation with Keidanren and other industry organizations. Furthermore, the committee made efforts to hold periodical information exchanges with labor union organizations for maintaining a proper relationship.



### New Enterprise: Implementation of Leader Seminars for Production Worksites in Chemical Factories

A training program aiming at the fostering of front line supervisor for production worksites was launched. A total of 103 people participated in the training sessions held three times (twice in Kawasaki, once in Osaka) in 2016. As an opportunity to learn security and disaster prevention/occupational health and safety and risk assessment, and to interact with the leaders of other business enterprises, we welcome more people in upcoming seminars.

# Activity Report: Economy and Tax System Committee

[Department of Business/Economic Information]

## Message

### Efforts Contributing to Global Deployment and the Further Development of the Chemical Industry

Today, with worldwide business opportunities for enterprises, responses to changes in not only domestic but also international business circumstances such as international tax issues and ESG investments are becoming increasingly important. We offer recommendations on various restrictions and systems including tax systems and provide information taking into consideration global trends and current status of the chemical industry.

**Hiroyuki Ninomiya**, Committee Chairman [Executive Officer, DIC Corporation]



## Activity Outline

Toward the development of the economy of Japan through active economic circulation, regulatory actions such as the relaxation of various regulations and the amendment of tax systems are being implemented. In these circumstances, we consolidate and share information regarding the economy and tax systems leading to recommendations or requests on government policies for the further growth of the chemical industry. Especially for tax systems, we are enhancing activities under cooperation with other industries.



## Focus

### FY 2017 Activities for Requesting a Revision on Tax System

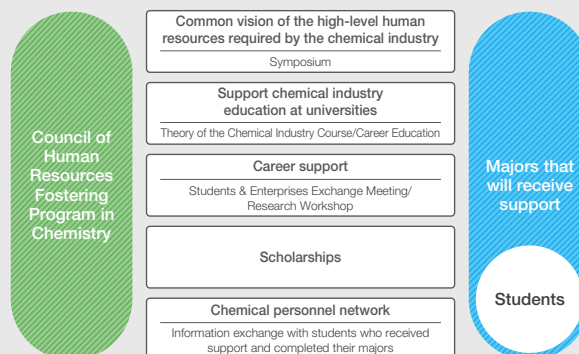
During this FY, while an amendment on the tax programs for promoting R&D is attracting attention, we have submitted five requests to be prioritized, such as the enhanced competitiveness of business enterprises through a substantial tax reduction, the coordination of tax systems related to investment in addition to the upgrading of relevant tax systems, and raised joint requests with other industrial associations. The tax programs for promoting R&D was determined to be maintained as a whole.

# Fostering Program of Human Resources in Chemistry

The Fostering Program of Human Resources in Chemistry was established in October 2010, responding to the recommendation made by the Chemical Vision Study Group set up by the Ministry of Economy, Trade and Industry in 2009. This program supports doctoral courses and their students responding to the needs of human resources demanded by the chemical industry for developing the young human resources that will form the foundation for enhanced international competitiveness in the chemical industry in Japan and the prosperity of the industry. The Council of Human Resources Fostering Program in Chemistry, with 36 member companies of JCIA favorable to this concept, contacts companies, supports job-hunting and award scholarships for doctoral students in chemistry.

Our new efforts include supporting chemical industrial education and organizing symposiums, and we look to further enhancement of programs through familiarization to many graduate students and the exchange of opinions.

## Fostering Program of Human Resources in Chemistry



## Image of Human Resources Required▶▶▶

- Human resources with a wide range of fundamental academic capabilities in addition to deep expertise in the specific fields
- Human resources with an excellent ability to set one's own tasks and management ability to create hypotheses and execute them
- Human resources with excellent leadership and communication abilities
- Human resources with a global sense

### TOPIC 1

## Holding the "Council of Human Resources Fostering Program in Chemistry Symposium 2016"

On July 6, the "Council of Human Resources Fostering Program in Chemistry Symposium 2016" was held at the Chemistry Hall.

Following the keynote lecture by Mr. Masuo Aizawa, a Japan Science and Technology Agency adviser, and a lecture on the messages from the chemical industry by Mr. Osamu Ishitobi, Chairman of this council and JCIA (Chairman, Sumitomo Chemical Company, Limited), innovative efforts on fostering advanced science human resources were introduced by 5 majors of graduate courses of the university.

In addition to reaffirming the importance of fostering advanced science human resources that will bear the future of the chemical industry, high expectations were centered on the further development of the Fostering Program of Human Resources in Chemistry.



### TOPIC 2

## Chemical Industry Education

For supporting chemical industry education in universities, it was determined to establish a course of the "Theory of the Chemical industry" with instructors dispatched from the companies of this council to Kobe University and Osaka City University in FY 2017. Prior to this, a special lecture (general theory I - III) of the "Theory of the Chemical industry" was provided at Osaka City University on January 19.

### TOPIC 3

## Selection of Majors that will Receive Support/Scholarships

The 7th screening for majors that will receive support was conducted in FY 2016 and support for 3 new majors was decided. (As of April 2017, 27 majors in 15 graduate schools were receiving support.) The excellent efforts by various majors are posted on the JCIA website.

For a major receiving support that is making especially excellent efforts on fostering human resources, a scholarship of 200,000 yen per month is awarded to a student nominated by each major for 3 years. In FY 2016, the scholarships were awarded to 31 students of 14 majors in 10 graduate schools.

# Activity Report: International Activities Committee

[International Affairs Department]

## Message

### Information Collection on Commercial Issues and Actions for Unfair Trading

FY 2016 was a turbulent year with Brexit and the bleak outlook on TPP coming into effect, etc. In FY 2017, we will promote activities toward the correction of unfair trading through information collection on trading issues and enhanced cooperation with the government while maintaining a favorable business environment for the chemical industry in Japan. Furthermore, we will support the sustainable development of the chemical industry by utilizing the International Council of Chemical Associations (ICCA) activities and opportunities for interaction with China (CPCIF), Korea (KOCIC), etc.

**Shinji Ogawa**, Committee Chairman [Managing Executive Officer, Mitsui Chemicals, Inc.]



## Activity Outline

This committee is handling JCIA's international matters by (a) grasping trading issues, (b) transmitting information related to the chemical industry, and (c) reinforcing relationships with overseas chemicals organizations.

The activities include (a) making proposals to the authorities regarding the regulations on country of origin and the amendment of anti-dumping rules in order to reflect the opinions of the chemical industry in Japan, (b) providing information to JCIA members, and (c) reinforcing relationships with the chemical industry in China, Korea, etc., through chemical industry dialog and participation in the operation of the ICCA, etc.



## Focus

### The 2<sup>nd</sup> Japan-China Chemical Industry Conference

In September 2016, the 2nd Japan-China Chemical Industry Conference was co-hosted by CPCIF and JCIA/JPCA. A total of about 50 people participated including Mr. Ishitobi, Chairman of JCIA and Mr. Tannowa, Chairman of JPCA, and an active exchange of opinions took place. During the plenary session, introductions were made on the current statuses of the chemical industry in both China and Japan, the 13th five-year plan in China, the efforts on the structural change of the petrochemical industry in Japan, etc. In the breakout sessions, information was exchanged between China and Japan

regarding the recent research and development and business expansion such as information transfer on chemicals contained in products, e-commerce, the development of new materials, etc. In the panel discussions, opinions were exchanged regarding the importance of grasping customer needs and the importance of the chemical industry as a solution provider.



TOPIC  
1

### The 7<sup>th</sup> Annual Meeting of Korea and Japan

In December 2016, the 7th annual meeting of Korea and Japan was held. Same as last time, an exchange of opinions and discussions were held after presentations from both groups on the themes of chemical management, responsible care and climate change.

Especially based on the background of rising interest in 1) Efforts for greenhouse gas reduction by Korea and 2) Actions for earthquakes in Korea, active discussions were held regarding the anti-seismic measures at chemical plants in Japan and the recovery actions after an earthquake disaster. Furthermore, opinions were exchanged regarding (a) the latest situation of chemical management, (b) humidifier disaster, and (c) taking on risk-based chemical management not only in Korea

and Japan, but also in China and Thailand. Through such annual meetings, individual relationship between both associations of Korea and Japan deepen and enable smooth exchanges and the sharing of information and as a result, contribute to the promotion of JCIA activities.



# International Efforts of JCIA

## - Activities of International Council of Chemical Associations (ICCA) -

In June 2016 in Colorado Springs, the USA and in October in Florence, Italy, the ICCA Board of Directors meetings were held to discuss the global issues common to the chemical industry. The main issues for discussion were 1) promotion of Responsible Care activities in China, India and Africa 2) promotion of cooperation with the value chain 3) contributions of the chemical industry in solving global warming 4) capacity building activities regarding chemical management 5) activities in cooperation with the UN organizations such as UNEP/UN Environment.

In August 2016 in Tokyo, ICCA Energy and Climate Leadership Group meeting (E&CC LG meeting) was hosted by Japan as the leader and chair. Attended by Mr. Ishitobi (Chairman of JCIA), discussions were held on actions for COP22, etc. Furthermore, in addition to introducing experiences and contents of activities in Japan, The E&CC LG made suggestions on actions for global issues during various ICCA meetings such as the CEO summit, the Global Executive Strategy Group meeting, the Steering Committee, etc.

Japan, a member of ICCA since its establishment in 1989 and with three seats next to Europe and the USA in the Board, is leading the ICCA activities by acting as chairs for the E&CC LG and the Capacity Building Taskforce.



October 2016, ICCA Board of Directors Meeting



August 2016, E&CC LG Meeting (Tokyo), Mr. Ishitobi, Leader (chairman of JCIA)



August 2016, E&CC LG Meeting (Tokyo), Center: Mr. Ishitobi, Leader (chairman of JCIA) Center Left: Mr. Shiozawa, Chair Center Right: Mr. Seth Roberts, Vice Chair

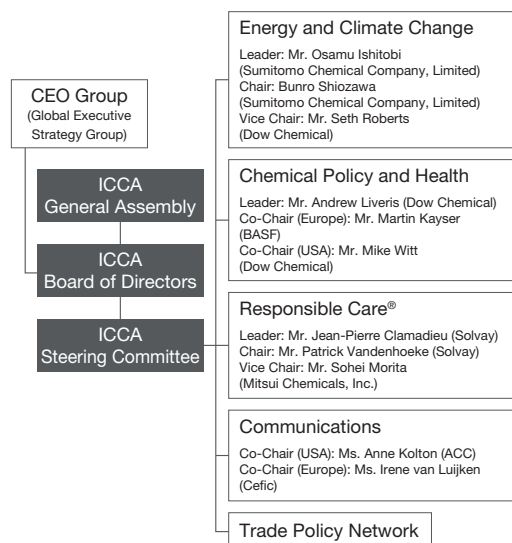
### ICCA (International Council of Chemical Associations)

This organization was established by the chemical industry associations of the U.S., Canada, Europe, and Japan in 1989. The number of member countries and regions is approximately 50 including the chemical industry associations of North and South America, Europe, Asia, Oceania, and the Gulf countries and also including observer countries such as China, Russia, and India. ICCA thus contributes to the development of sustainable society through its engagement in voluntary and other activities of which "Responsible Care" is the most representative one.

The organization is comprised of four main leadership groups which implement and promote strategic initiatives toward the solution of challenging issues in the respective fields, and engage in communication, notably offering opinions to policy decision makers. For more information, refer to ICCA website.

<http://www.icca-chem.org>

### ICCA Organization Chart



# Activity Report: Public Relations Committee

[Public Relations Department]

## Message

### For More Familiar Chemicals

Three years from the shift into high gear on the spreading of activities for Chemistry Day and “Chemicals Week” by the Public Relations Committee, a certain level of results has been achieved on the dissemination and spread among members thanks to the great support by members. After today, we would like to further enhance the cooperation with all members and accelerate diffusion into society through a lateral spread of various events and fulfilling public relations.

**Keiichi Kamiguchi**, Committee Chairman [Director & Corporate Officer, Showa Denko K.K.]



## Activity Outline

The Public Relations Committee transmits information to society on the efforts made by the chemical industry in Japan regarding the environment, health, safety, the fostering of human resources, etc., and the activities of JCIA. Furthermore, it makes efforts on a further enhanced presence of the chemical industry through various activities for transmitting the value and attractiveness of chemistry to youth as an enterprise of “Dream Chemistry 21” under cooperation with related associations and through various activities toward raising public awareness of October 23, Chemistry Day.

Public Relations  
Committee

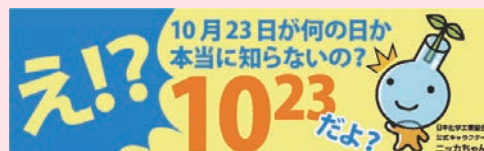
Chemistry Day  
Promotion WG

Notes: WG (Working Group)

## Focus

### October 23, Chemistry Day

To familiarize many people with the importance of chemistry and the chemical industry greatly contributing to livelihoods and the economy, as well as disseminating benefits of “Chemistry” that supports the lives of people, the Japan Chemical Industry Association, the Chemical Society of Japan, the Chemical Industry Council and the Japan Association of Chemical Innovation established October 23 as Chemistry Day and Monday through Sunday including October 23 as “Chemicals Week”. JCIA held a Chemistry Day chemical-experiment show for children 2016 in Kyocera Dome Osaka as one of the Dream Chemistry 21 campaigns for 2 days on October 23 and 24 last year and welcomed more than 7,300 visitors. In addition, activities were implemented toward the spread of Chemistry Day into society through support for various events implemented by the chemical industry during Chemicals Week.



Month of Event	Event Name	Participating Companies & Associations	Place of Event	Number of Visitors (Approx.)
7 times every year	Children's Science Experiment Class	Chemical Society of Japan JCIA	Science Museum, etc.	Gross 540
August	Summer vacation chemical-experiment show for children	15 Companies 5 Associations	Science Museum	5,000
October	Chemistry Day chemical-experiment show for children	10 Companies 10 Schools and Associations	Kyocera Dome Osaka	7,300
October	Chemicals Week "Your Future, Chemistry's Future"	Chemical Society of Japan Tokyo University	Tokyo University	80



## TOPIC 1 Children's Science Experiment Class/ "Dream Chemistry 21" Committee

A Children's Science Experiment Class that earns a good reputation every year was held again in Tokyo and Sapporo in 2016 and a total of 540 grade school children participated under instruction by junior/senior high and college teachers. This session aims at attracting children to chemistry and chemical products in their immediate environment and think about the "magic in life" through experiments or manual training/observation, which are rarely experienced during ordinary classes.



## TOPIC 2 Chemistry Grand Prix/International Chemistry Olympiad

The "Chemistry Grand Prix" was held in 2016, in which a record 3,792 junior/senior high students participated from all over Japan with such confidence in chemistry that they thought "I am the best!" and competed on ability in chemistry during July through August.

## TOPIC 3 Introduction of JCIA Activities

To inform a wide range of people at all ages about the chemical industry of Japan, the "Chemical Industry of Japan in Graphs" and the "Annual Report" introducing JCIA activities were published in July and August 2016, respectively.



# Activity Report: Security Information Management Subcommittee [General Affairs Department]

## Activity Outline

The Security Information Management Subcommittee is responsible for comprehensively addressing issues related to the information security of JCIA members through collaboration with the Information-technology Promotion Agency (IPA). It conducts a wide range of activities, including keeping members updated on information security, providing education, and promoting interaction and networking among members. It also organizes seminars for all JCIA member companies, including those not represented on the subcommittee, to raise the level of information security across Japan's entire chemical industry.

Security Information Management Subcommittee

Security information liaison meeting

## Focus

### The Basis of Security is Information Sharing

The world of information security is insatiable where a new technology is disclosed while attack techniques are becoming increasingly sophisticated day by day. Information security engineers must have the capability to investigate, make and execute plans from a wide perspective by promptly analyzing the security information and technologies required by various organizations of various companies. The engineer must also verify the effectiveness of countermeasures, and estimate costs

and maintenance until the start of operations, while always understanding every security trends. Practical and active information exchange becomes very important in these tasks, in addition to the knowledge and skills of an engineer oneself. The Security Information Management Subcommittee not only provides useful information, but also serves as a place for members to share information on various expertise.

# Information Distribution Services Provided by JCIA [Mail Magazine]

JCIA distributes the following mail magazines for member companies/associations who wish to receive them. Please contact the relevant office for a new delivery request.

✓ **Ankan-Net** (Safety and Environment Net)  
Contact: Environment and Safety Department

The notices, communications and regulatory information guidelines regarding environmental safety from the ministries that require publicity are delivered from Ankan-Net.  
(Up to 2 addresses per company/association)

✓ **RC Net**  
Contact: Responsible Care Department

Information delivery for registered company members of the Responsible Care Committee. Announcements are provided on activities related to Responsible Care, information on seminar schedules and invitations for participation.



✓ **Chemical Management Net**  
Contact: Chemicals Management Department

The latest information regarding domestic/overseas regulatory trends for chemical management and seminar schedule information are delivered in Chemical Management Net.

化学品管理ネット	
2017.04.26	2017/4/26【化学品管理ネット】「倫理指針改正セミナー」開催のご案内
2017.04.17	2017/4/17【化学品管理ネット】「改正安衛法対応 リスクアセスメントセミナー」開催のご案内
2017.04.10	2017/4/10【化学品管理ネット】ケミカルリスクフォーラム平成29年度新規会員募集のご案内
2017.04.07	2017/4/7【化学品管理ネット】米国有害物質規制法（TSCA）関連情報
2017.04.03	2017/4/3【化学品管理ネット】「名古屋講演会関連セミナー」開催のご案内

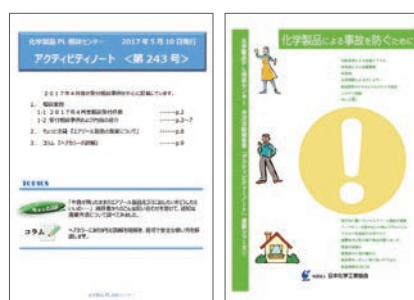
✓ **PR Net**  
Contact: Public Relations Department

In addition to event information related to public relations such as Chemistry Day promotion activities and the Chemical Experiment Shows, implementation reports on major events hosted by JCIA, etc., are provided.



## Introduction of Chemical Products PL Consulting Center

The Product Liability (PL) Act was promulgated on July 1, 1994. An additional resolution of the Diet saying that “In a nod to the effectiveness of the prompt and equal relief system for sufferers not relying upon lawsuits, to enhance and reinforce the dispute handling system other than lawsuits” was adopted during the process of deliberation. Because the coordination of a dispute handling system utilizing professional knowledge on products was required, the Chemical Products PL Consulting Center was established in June 1995 as an organization for responding to consultations regarding chemical products from a wide range of consumers, not just PL accidents. This center handles consultations related to the chemical products made by business operators and consumer centers all over Japan, in addition to general consumers from a professional perspective. Furthermore, emphasis is placed on enlightening activities through the provision of information, the publication of pamphlets, etc., for the prevention of accidents caused by chemical products. The activity of this center is published on the website as



monthly “Activity Note” reports or annual activity reports for your reference.

The latest information is provided by the newsletter. Please subscribe by e-mail to [PL@jcia-net.or.jp](mailto:PL@jcia-net.or.jp)

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## Access Information



Kayabacho Station. (Tokyo Metro Hibiya and Tozai Lines)  
Approximately 3 minutes on foot from Exit No.1 or Exit No.3

Hatchobori Station. (JR Keiyo Line)  
Approximately 8 minutes on foot from Exit No.B1

### Editorial policy

The "JCIA Annual Report" is published to inform a wide range of stakeholders about the JCIA's activities. Our activities are reported by committee in an effort to make them easier to understand, and the pages of "Activities of JCIA in FY 2016" and the "Focus" or "TOPIC" in the committee report pages are connected for further ease of recognition. Furthermore, in addition to the focus on three awards ("Safety Awards," "Technology Awards" and "Responsible Care Awards"), new information such as the introduction of the mail magazine is inserted. In addition, the release of the "JCIA Annual Report Reference Materials," which provides various data and introduce initiatives related to JCIA activities, is scheduled for this autumn.

### Targeted organizations

The Japan Chemical Industry Association and member companies and organizations.

### Languages

This report is issued in two languages, Japanese and English.

### Reporting period

April 2016–March 2017  
(Some information from outside this period is included.)

### Publication date

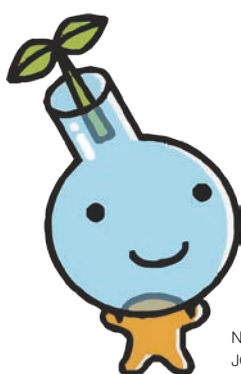
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Nikka-chan:  
JCIA's official character

October 23 is  
**Chemistry Day**



**NON  
VOC**

This report has been printed using printing processes and materials that are considerate to the environment. Energy-saving UV printing has been used. It is printed with NON-VOC ink that releases only tiny amounts of volatile organic compounds into the atmosphere, on paper certified by the Forest Stewardship Council (FSC) that contains ingredients from forests that are managed in an appropriate manner.

JCIA Annual Report 2017



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